

## **REMARKS**

This Amendment is submitted in response to the Office Action dated January 10, 2008, having a shortened statutory period set to expire April 10, 2008. In the present Amendment, Applicant has amended Claims 12, 27 and 42 to include the features formerly recited in Claims 53, 67, 81, which are canceled herein. Claims 4, 68 and 82 have been amended to adjust the recited dependencies accordingly.

### **I. CLAIM REJECTIONS UNDER 35 U.S.C. § 112, 2<sup>nd</sup> PARAGRAPH**

In paragraph 8 of the present Office Action, Claims 12, 27, 42, 52-59, 66-73 and 80-87 are rejected under 35 U.S.C. 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention based upon the recitation of “refraining from recording values” in the claims. In response, Applicant has amended Claims 12, 27 and 42 to recite “that no values assumed by the monitored signal set are recorded for those cycles of functional operation during which the control signal is not asserted.” Applicant respectfully submits that the rejection of the claims under 35 U.S.C. § 112, second paragraph, is overcome by these amendments.

### **II. CLAIM REJECTIONS UNDER 35 U.S.C. § 103**

In paragraph 11 of the present Office Action, Claims 12, 27, 42, 52-55, 57-58, 66-73 and 80-87 are rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 5,604,895 to *Raimi* in view of U.S. Patent No. 4,821,178 to *Levin et al. (Levin)*. In paragraph 12 of the present Office Action, Claims 59, 73 and 87 are rejected under 35 U.S.C. 103(a) as unpatentable over *Raimi* in view of *Levin* and further in view of U.S. Patent No. 6,057,839 to *Advani*. Also, in paragraph 13 of the present Office Action, Claims 56, 58, 70, 72, 84 and 86 are rejected under 35 U.S.C. 103(a) as unpatentable over *Raimi* in view of *Levin* and further in view of the Examiner’s Official Notice. Finally, in paragraph 14 of the present Office Action, Claims 57, 71 and 85 are rejected under 35 U.S.C. 103(a) as unpatentable over *Raimi* in view of *Levin* and further in view of U.S. Publication No. 2003/0158871 to *Fomenko*. Those rejections are respectfully traversed, and favorable reconsideration of the claims is requested.

**A. Combination of *Raimi* and *Levin* does not disclose “recording ... a number of functional cycles elapsed between said values assumed by the monitored signal set” as recited in Claim 12**

Applicant respectfully submits that the rejection of exemplary Claim 12 under 35 U.S.C. § 103 is overcome because the combination of *Raimi* and *Levin* does not disclose each feature of exemplary Claim 12 as amended and, in particular, does not disclose:

recording within the trace array a number of functional cycles elapsed between said values assumed by the monitored signal set.

With reference to this feature, page 6 of the present Office Action cites col. 26, line 58 through col. 27, line 4 of *Raimi*. The cited passage discloses:

Separate trak\_file output files are available for each test case simulated. These trak\_files detail the extent to which a particular test case covers events tracked in each HDL file simulated. The task of a test reduction algorithm or program would be to examine these trak\_files, and to find a minimal subset of tests such that certain predetermined coverage goals are met. These constraints could be set out more precisely as: x % execution check coverage, y % dead-logic coverage, z % behavioral-controllability coverage, or z % of any other type of check run, and a total run time (in simulation clocks) under t clocks. The task of the program would be to find the subset of tests which gave the greatest coverage percentages, while not exceeding the total clock limit. [Emphasis supplied]

With respect to claimed feature, the cited passage discloses at most that a test reduction algorithm can set as a test case constraint a total run time in terms of simulation clocks. The cited passage does not disclose “recording within the trace array a number of functional cycles elapsed between said values assumed by the monitored signal set,” as claimed. Consequently, the combination of *Raimi* and *Levin* does not render exemplary Claim 12, similar Claims 27 and 42, or their respective dependent claims unpatentable under 35 U.S.C. § 103.

**B. Combination of *Raimi* and *Levin* does not disclose each feature recited in exemplary Claim 52**

Applicant respectfully submits that the rejection of exemplary Claim 52 under 35 U.S.C. § 103 is overcome because the combination of *Raimi* and *Levin* does not disclose each feature of exemplary Claim 52 and, in particular, does not disclose:

... exporting the trace data in a trace file indicating an association between a value of said monitored signal set and an enumerated value containing a textual string.

In the present Office Action, Claim 52 is rejected based upon a position advanced in the Advisory Action dated May 24, 2007, which argues that the instrumentation code set forth at col. 10, lines 48-51 of *Raimi* discloses the claimed “exporting” step. While Applicant agrees that the disclosed instrumentation code includes the assignment of an integer value to a variable to record the results of a check of a logical AND operation, Applicant respectfully points out that the mere disclosure of the assignment of an integer value to a variable by instrumentation logic as taught by *Raimi* does not disclose that a trace file indicates “an association between a value of said monitored signal set and an enumerated value containing a textual string,” as claimed. Consequently, the combination of *Raimi* and *Levin* does not render exemplary Claim 52 or similar Claims 66 and 80 unpatentable under 35 U.S.C. § 103.

**C. Combination of *Raimi* and *Levin* does not disclose each feature recited in exemplary Claim 54**

Applicant respectfully submits that the rejection of exemplary Claim 54 under 35 U.S.C. § 103 is overcome because the combination of *Raimi* and *Levin* does not disclose each feature of exemplary Claim 54 and, in particular, does not disclose:

the trace array has a counter that counts the functional cycles; and  
said recording trace data includes recording in the trace array an entry indicating overflow of said counter.

With respect to the above features, the present Office Action cites col. 6, lines 13-22 of *Levin*, which disclose:

As previously stated, event-sampling rates may be controlled by limiting the recording of event information to every Nth event. This is useful in cutting down the amount of data to be collected for cases where information integrity is not

seriously disturbed by such data loss, such as the "instruction first cycle" (IFC), for example N might be 5 to 7 if the other sampled data of interest is happening frequently enough; and for branch events, N might be 2.

While the cited passage discloses an event counter, the cited passage does not disclose a functional cycle counter as claimed or recording an entry indicating a counter overflow as claimed. Consequently, the combination of *Raimi* and *Levin* does not render exemplary Claim 54 or similar Claims 68 and 82 unpatentable under 35 U.S.C. § 103.

**D. Applicant respectfully traverses Official Notice relied upon in the rejection of Claims 56, 58, 70, 72, 84 and 86**

In accordance with MPEP 2144.03, Applicant respectfully traverses the Official Notice relied upon in the 35 U.S.C. § 103 rejections of Claims 56, 58, 70, 72, 84 and 86. In particular, the Examiner attempts to rely upon unsupported assertions regarding the file formats employed by Microsoft software products and other prior art software, and Applicant traverses such assertions as unsupported and not well-known.

Moreover, even if the Examiner's assertions regarding the file formats employed by Microsoft and other software products could be supported by appropriate citations to publicly available publications, such citations would not, in and of themselves, render the present claims unpatentable.

**III. CONCLUSION**

No additional fee is believed to be required. If, however, any additional fees are required, please charge those fees to IBM Corporation Deposit Account No. 09-0447.

Respectfully submitted,



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